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What is Asbestos?

Asbestos is the generic term for a group of naturally occurring, fibrous minerals with a high tensile strength, flexibility, and resistance to heat, chemicals, and electricity.

What does asbestos look like?

Asbestos occurs as long fibrous crystals but by the time it is incorporated into a product the fibers are so small you would need a microscope to see them!

Is asbestos dangerous?

Because very few asbestos containing materials (ACM) are being installed today, due to the Environmental Protection Agency (EPA) phase out rule in 1989, most worker exposures occur during the removal of asbestos or during renovation or maintenance in older buildings.

- ACM that is easily crumbled (friable) i.e., by just hand pressure, is dangerous because it can easily release its microscopic asbestos fibers to become airborne. Example: Ceiling tile.
- ACM that is hard to damage (non-friable) can still release asbestos when damaged such as by cutting, sawing and sanding or being scraped. Example: Floor tile.
- The danger of asbestos is when the microscopic asbestos fibers suspended in the air are inhaled or get in drinking water which with exposure to large amounts over a long time can lead to chronic illnesses such as:
 - Asbestosis (reduced lung capacity through accumulated scarring)
 - Mesothelioma (cancer between the inner and outer lining of the lungs)
 - Gastrointestinal (stomach) cancer
 - Lung Cancer (smoking alone causes lung cancer; smokers with chronic asbestos exposure have a 50-100 times increased chance of lung cancer)

How quickly would I get sick if I worked with asbestos?

Symptoms of asbestos-related diseases may not show for 10 to 40 years. Whether you get sick depends on how often and how much you are exposed to asbestos. A one-time small amount (transient exposure) has little potential for injury. It is very doubtful that one fiber or a few will cause illness or kill. The more medically accepted dose-response theory is the greater the amount and frequency of exposure, the greater the risk. Our goal is incidental to no exposures.



Am I entitled to a medical exam if I am exposed to asbestos?

Since BCB employees are to follow work procedures that prevent chronic exposure to asbestos, employees that experience transient exposures most likely will not contract an asbestos related disease. An X-Ray or other tests will not provide you with any useful asbestos-related illness information, but you may always consult with your doctor if you are still concerned. Workers Compensation probably will not cover such a consult.

What is a "safe" level of asbestos exposure?

The current Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit is 0.1 fibers per cubic centimeter (f/cc) per an average 8-hour workday or 1 f/cc per 30 minutes of exposure. Exposure level is normally determined through air sampling (not required for the BCB due to our not working directly with asbestos).

- Asbestos Containing Material (ACM): any building material that contains more than one percent (1%) asbestos
- Presumed ACM (PACM): Thermal System Insulation, Surfacing Materials and Floor Tile installed prior to 1980 can be presumed to (treat as if it does) contain asbestos. Other materials that have a historical basis may also be presumed to contain asbestos, like fire doors.

Where can I expect to find asbestos?

Asbestos is found in sprayed-on fireproofing, thermal system insulation (boilers, steam pipes), surfacing materials (plaster, stucco), ceiling and vinyl floor tiles, cement pipe and sheet roofing felts and shingles, fire-resistant drywall, drywall joint compounds, mastics, and sound absorption products. The Consumer Product Safety Commission has banned the use of asbestos in many home products for several decades, and other regulatory agencies like the EPA and OSHA also regulate asbestos in the work environment. However, other countries are not as strict as the U.S. and many imported materials still contain asbestos.

Who may be exposed to asbestos?

BCB employees should not be exposed to asbestos through their routine work practices. However, employees, such as in Facilities Management's Building Maintenance, Building Systems and Energy/Environmental teams, the Custodial Floor crew or Division of State Information Technology telecommunications installers have activities that bring them into closest contact with ACM. Other employees may also need to be aware of specific locations where asbestos is known or suspected to exist so they know to use proper work practices to prevent from disturbing or damaging the ACM.



What should I do if I think any materials in my work area contain asbestos?

- You should always check the O&M manual or Asbestos Summary Log to determine if your work area contains ACM/PACM prior to beginning work.
- Otherwise, stop your work then immediately notify your supervisor and the Asbestos Control Manager who will inspect the area and check records to determine if the material has to be tested, repaired or removed, as required. Do not proceed without authorization and further instruction.

Is testing necessary?

No. Historical evidence has proven that certain materials usually contain asbestos so are considered as PACM. However, the only way to prove a *suspect* material does *not* contain asbestos is to test it. The cost of testing could save significant removal and disposal costs for the BCB if the PACM tests negative.

How long will testing take?

The Asbestos Control Manager has several asbestos-certified contractors on call (indefinite delivery contracts) available to inspect, test, and to remove or repair ACM/PACM. There is no field-testing that will tell us that a material does or does not contain asbestos. Samples have to be taken and sent to a laboratory. Results normally take a week but they can also be expressed overnight so may only take a few days.

How am I to do my work if there is ACM/PACM?

After determining that materials in your assigned work area contain asbestos then the Asbestos Control Manager will hire an asbestos-qualified contractor to remove enough of the material for you to do your work. After your work is completed, the replacement materials should be asbestos-free.

Why don't we just remove all asbestos?

As long as the ACM is in good condition and remains undamaged there is very little chance of an asbestos exposure. Almost all of the ACM has been removed where our maintenance crews need to do preventive and corrective maintenance. Replacement materials manufactured with no asbestos usually are labeled "asbestos free." Additionally, so much asbestos was originally installed that removal would take years, be very costly, would unnecessarily interfere with our normal operations and the cleanup itself would expose workers – all reasons why the EPA does not advocate such a clean up process.



If I can't see it, how do I know where asbestos is located?

- An Operations & Maintenance (O&M) manual for each building includes construction records, professional asbestos testing and laboratory analysis. These manuals are located in Room 116-A of the FM Office Building, 921 Main Street in Columbia.
- Since the O&M manuals are reference books and are not to be removed, an Asbestos Summary Log is available for employee field use.
- Questions about asbestos can be directed to Aaron Redmond, BCB Asbestos Control Manager and Inspector, or to JP Gouffray, BCB Asbestos Inspector.

How could I be exposed to asbestos?

Asbestos can be released when the ACM becomes damaged by:

- Physical contact, i.e., scraped, gouged, crushed, and use of portable power tools
- Air erosion, i.e., high velocity air flow
- Vibration, i.e., from water/air pressure, loud noises, nearby vehicle traffic
- Water, i.e., rain or water leaks

What does asbestos damage look like?

The damaged material in which asbestos is contained and or its covering can be:

- Deteriorated, i.e., pieces hanging or fallen down, crumbled or pieces of debris or dust below from vibrating equipment, pipes, etc.
- Delaminating, i.e., the layers in a material have come apart (flaking, blistering), are curling or the glue is no longer adhering and has separated, i.e., floor tile that has broken or come loose
- Water damaged ceiling tile, sheet rock, and insulation or floor tiles
- Torn from by being struck
- Debris of unknown contents

What should I do if I see damaged ACM/PACM?

If you see or suspect that ACM has been damaged, or even if you do not know if the debris contains asbestos:

- Stop work. Immediately notify your supervisor and the Asbestos Control Manager or Inspector.
- The Asbestos Control Manager is to report a "major release" (more than 3 square or linear feet) of friable ACM to the SC Dept. of Health and Environmental Control (DHEC)
- Cordon off the area, i.e., with barriers and warning tape and/or signs.
- Wait for further instruction.



How do I keep from disturbing or damaging ACM/PACM?

- Do not drill, grind, sand, cut, saw, abrade, break, core, puncture or otherwise damage ACM/PACM
- Avoid contact, i.e., do not touch, hang or lean ladders, brooms or other objects, tools or equipment onto, from or against ACM/PACM
- Only trained and authorized personnel are to work with or clean up ACM/PACM, i.e., a SC-licensed asbestos contractor.

What housekeeping procedures can I use in areas that have ACM/PACM?

- Avoid dry sweeping, dusting or using compressed air on dust or debris suspected or known to contain asbestos
- Use wet clean-up methods, i.e., wipe with damp rag, wet mop or steam clean carpets
- Vinyl and asphalt flooring can be maintained by:
 - Stripping finishes using low abrasion pads at speeds less than 300 rpm and wet methods using cleaning solutions and/or waxes
 - Burnishing or dry buffing may be done if the flooring has sufficient finish so the pad does not contact the asbestos containing floor material
- Use a vacuum with a high efficiency particulate air (HEPA) filter to collect dust. HEPA filters are not washable and reusable. Dispose of the HEPA filter and debris in a leak tight container
- Contact Asbestos Control Manager for proper disposal of ACM debris

Is anything being done to protect BCB employees, tenants and visitors from asbestos exposure during renovations?

- Besides our asbestos safety policy and employee awareness training, work practices include hiring an asbestos-qualified contractor to remove, repair or contain asbestos, and clean the area before you can do your work.
 - o Contractors hired to do work involving ACM are to use physical barriers (such as sheets of plastic), warnings (such as signs and warning tape prohibiting entry except to authorized workers), and vacuum capture systems to protect anyone not involved in the asbestos work. ACM debris must be disposed of using special procedures and only in asbestos-authorized waste sites.

"Authorized Personnel" does not include you!

(BCB employees normally are not authorized to enter asbestos work areas)



SAFETY PROGRAM

ASBESTOS in BCB FACILITIES – Frequently Asked Questions





- Much asbestos in our facilities was abated (repaired or removed) in the late 1980s and 90s however small abatement projects still occur, as required. Abatement, renovations and demolition work must have DHEC approval prior to the planned work. ACM waste must also be disposed of in DHEC approved landfills.
- Any ACM that remains must:
 - Have signs posted warning of the ACM
 - o Be regularly inspected. If it has been damaged or deteriorated then it has to be abated.

Can I work, sweep or dust in areas where there are asbestos warning signs?

Even if there is ACM in your work area but it is in good condition then sweeping and dusting can be used if wet methods are impractical. However, repair, removal or replacement of ACM by BCB employees is prohibited.

Why are asbestos warnings in my area?

- Asbestos warning labels are usually placed where there is likelihood to cause damage to ACM; they are to warn you to take care when doing maintenance or housekeeping so as not to damage known or presumed ACM.
- Warning signs:
 - List all materials confirmed or presumed to contain asbestos in the building
 - Are posted at entrances to Mechanical and Janitorial Rooms in the building to make employees aware of the ACM/PACM to avoid inadvertent damage.
 - Restrict entry to regulated work areas to authorized work personnel only

Why do I have to have this Asbestos Awareness training?

- The OSHA standard on protecting employees from asbestos, 29 CFR 1910.1001, requires all
 maintenance and housekeeping staff to have Asbestos Awareness training upon initial hire and
 annually thereafter.
- The BCB is committed to making you aware of potential hazards, such as asbestos, in the work place and ways you can protect yourself.
- Your fellow employees and managers asked for information about asbestos.